

## isc Silicon NPN Power Transistor

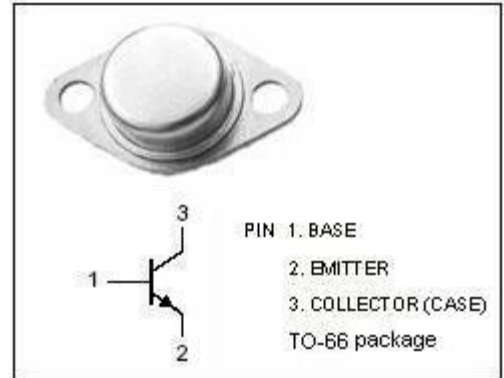
2SC2913

## DESCRIPTION

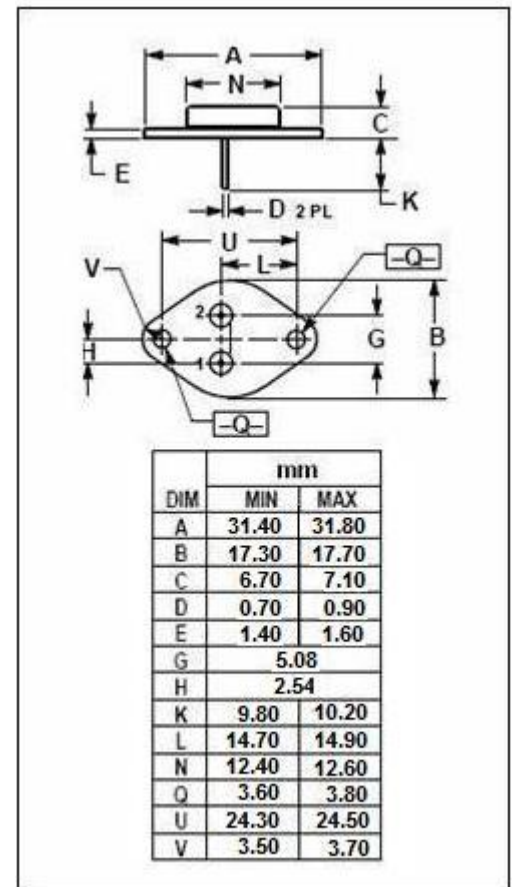
- High Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = 400V$  (Min)
- High Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## APPLICATIONS

- Switching regulator and high voltage switching applications
- High speed DC-DC converter applications.


ABSOLUTE MAXIMUM RATINGS( $T_a = 25^\circ C$ )

SYMBOL	PARAMETER	MAX	UNIT
$V_{CBO}$	Collector-Base Voltage	500	V
$V_{CEO}$	Collector-Emitter Voltage	400	V
$V_{EBO}$	Emitter-Base Voltage	7	V
$I_C$	Collector Current-Continuous	7	A
$I_B$	Base Current-Continuous	2	A
$P_C$	Collector Power Dissipation @ $T_c = 25^\circ C$	40	W
$T_j$	Junction Temperature	150	$^\circ C$
$T_{stg}$	Storage Temperature Range	-65~150	$^\circ C$



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## ELECTRICAL CHARACTERISTICS

T<sub>c</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> = 10mA; I <sub>B</sub> = 0	400			V
V <sub>(BR)CBO</sub>	Collector-Base Breakdown Voltage	I <sub>C</sub> = 1mA; I <sub>E</sub> = 0	500			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 7A; I <sub>B</sub> = 1.4A			1.0	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 7A; I <sub>B</sub> = 1.4A			2.0	V
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = 3A; V <sub>CE</sub> = 5V	12			
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = 7A; V <sub>CE</sub> = 5V	8			
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 400V; I <sub>E</sub> = 0			0.1	mA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 7V; I <sub>C</sub> = 0			1.0	mA

## Switching Times

t <sub>r</sub>	Rise Time	V <sub>CC</sub> = 200V; R <sub>L</sub> = 50 Ω I <sub>B1</sub> =- I <sub>B2</sub> = 0.4A			1.0	μs
t <sub>stg</sub>	Storage Time				2.5	μs
t <sub>f</sub>	Fall Time				1.0	μs

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